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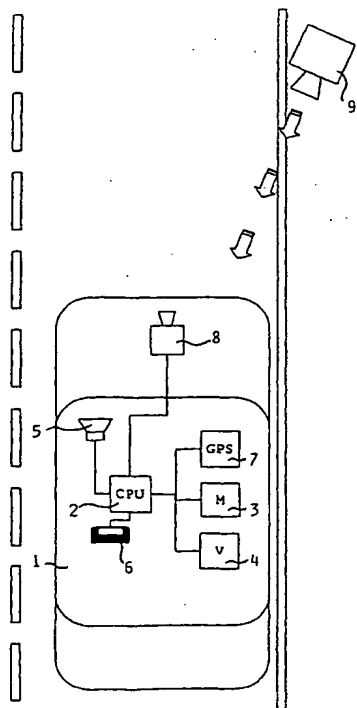
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[Continued on next page]

(54) Title: DEVICE AND METHOD FOR PREVENTING SPEEDING

(57) Abstract: A device for preventing a vehicle from speeding, which device comprises a switching device, a speedometer present in the vehicle, which is connected to said switching device and which measures the speed of the vehicle, as well as a transmitter connected thereto, wherein the switching device is so arranged that the transmitter will only transmit a signal mainly if and as long as the speed measured by the speedometer is higher than a predetermined limiting value.



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DEVICE AND METHOD FOR PREVENTING SPEEDING

- 5 The invention relates to a device for preventing a vehicle from speeding.

Speeding checks are currently being carried out to an increasing extent, at least in the Netherlands, and as a
10 consequence an increasing number of increasingly heavy fines are being imposed. Consequently there is a need among car owners and drivers for a device by means of which the risk of receiving such fines can be reduced in an efficient and simple manner.

15

To that end, the device comprises a switching device, a speedometer present in the vehicle, which is connected to said switching device and which measures the speed of the vehicle, as well as a transmitter connected thereto, in which
20 the switching device is arranged in such a manner that the transmitter will only transmit a signal mainly if and as long as the speed measured by the speedometer is higher than a predetermined limiting value. It will be understood that said limiting value preferably corresponds to the local maximum
25 speed. The signal may be a warning signal, for example, which can induce the driver to reduce the speed of the vehicle.

In a first embodiment, the device comprises inputting means, by means of which a user can adjust the limiting value at his
30 own discretion. In a second preferred embodiment, the device comprises a GPS (Global Positioning System) position finding device, in which the limiting value is adjusted in dependence on the geographic position of the vehicle as found. This

latter variant is in particular advantageous if the device is connected to a database in which the geographic positions are linked to the maximum speed that locally obtains, so that the adjusted limiting value will automatically correspond to the local maximum speed at practically any moment.

In another preferred embodiment, the speedometer also comprises a GPS position finding device, in which the speed is determined in that the distance between two positions as found is divided by the time required for covering said distance.

Preferably, the transmitted signal comprises an acoustic signal for warning the driver. Furthermore, the transmitted signal preferably comprises light and/or laser pulses. Light pulses, too, constitute an efficient way of warning the driver of a vehicle, whilst laser pulses may be used effectively for causing interference with any external speed measuring equipment operating on the basis of laser techniques, assuming, of course, that this is legally allowed.

In a special preferred embodiment of the invention, the device furthermore comprises a detector for detecting external measuring equipment for measuring the speed of a vehicle, in which the switching device is furthermore so arranged that the signal will only be transmitted upon detection of said external measuring equipment. This enables the driver to adjust the speed of the vehicle in time upon detection of such measuring equipment, whilst the driver will not be unnecessarily alerted to the presence of such equipment when driving at a speed below the allowed speed.

The use of the aforesaid laser pulses thus makes it possible to prevent unnecessary transmission of the interference signal when the vehicle is not driving faster than the maximally allowed speed.

5

The invention also relates to a method for preventing speeding by a vehicle, in which a switching device is connected to a speedometer present in the vehicle, which measures the speed of the vehicle, in which the switching
10 device only allows a transmitter connected thereto to transmit a signal mainly if and as long as the speed measured by the speedometer exceeds a predetermined limiting value.

The invention will now be explained in more detail by means
15 of an embodiment which is schematically shown in Figure 1.

The Figure schematically shows a car 1 in top plan view while said car is driving on a road. The car 1 is fitted with a central processing unit 2, which is connected to a memory
20 module 3, a speedometer 4 and a loudspeaker 5. Furthermore, the central processing unit is connected to an input/output unit 6, which is fitted with a small keypad and a small display screen. In a simple embodiment, the driver inputs a limiting value as regards the speed, which may be a local
25 maximum speed, before or during a trip by means of said input/output unit 6, upon exceeding of which speed the driver wishes to hear an acoustic warning signal that will enable him to reduce his speed. The limiting value is stored in the memory module 3. The central processing unit 2 receives
30 information as to the actual speed of the car from the speedometer 4, and the central processing unit 2 activates the loudspeaker 5, which transmits a warning signal if and as

long as the actual speed is higher than the adjusted limiting value.

In a more extensive embodiment, the central processing unit 2
5 is also connected to a GPS receiver 7, which is capable of
establishing the geographic position of the car. GPS
receivers are known per se, and their operation is considered
to be known, therefore. In this embodiment, the memory module
3 comprises a database in which geographic positions, in
10 particular of the road system and the locally obtaining
maximum speeds, are stored. Preferably, said database is
updated with new information and alterations on a regular
basis. The central processing unit 2 determines the local
maximum speed on the basis of the geographic position
15 supplied by the GPS receiver and the information obtained
from the database and inputs said value as a limiting value.
When this is done at short intervals, the limiting value will
correspond to the local maximum speed practically at all
times.

20

In yet another embodiment, the central processing unit 2 is
furthermore connected to a laser detector/transmitter 8,
which is capable of detecting the laser signal from an
external laser speed measuring device 9. If such a device is
25 detected, and if moreover the speed of the car 1 is higher
than the adjusted limiting value, the central processing unit
2 will activate the loudspeaker to transmit a special warning
signal. The warning signal may also be a (flashing) light
signal. In those cases where this is legally allowed, the
30 driver may also opt to have the central processing unit 2
cause the laser detector/transmitter 8 to transmit
interference light or laser pulses instead of or

simultaneously with the warning signal, as a result of which the measuring device 9 will be unable to carry out a speed measurement. An example of such a method for causing interference by means of laser pulses is described in

5 International patent application WO 97/21110, and consequently it will not be discussed anew herein.

CLAIMS

1. A device for preventing a vehicle (1) from speeding,
which device comprises a switching device (2), a
5 speedometer (4; 7) present in the vehicle, which is
connected to said switching device and which measures
the speed of the vehicle (1), as well as a transmitter
(5; 8) connected thereto, wherein the switching device
is so arranged that the transmitter (5; 8) will only
10 transmit a signal mainly if and as long as the speed
measured by the speedometer (4; 7) is higher than a
predetermined limiting value.
2. A device according to claim 1, wherein the device
15 comprises inputting means (6), by means of which a user
can adjust the limiting value at his own discretion.
3. A device according to claim 1 or 2, wherein the device
comprises a GPS position finding device (7) and wherein
20 the limiting value is adjusted in dependence on the
geographic position of the vehicle (1) as found.
4. A device according to claim 1, 2 or 3, wherein the
speedometer (7) also comprises a GPS position finding
25 device, and wherein the speed is determined in that the
distance between two positions as found is divided by
the time required for covering said distance.
5. A device according to any one of the preceding claims,
30 wherein the transmitted signal comprises an acoustic
signal.

6. A device according to any one of the preceding claims,
wherein the transmitted signal comprises light and/or
laser pulses.
- 5 7. A device according to any one of the preceding claims,
wherein the device furthermore comprises a detector (8)
for detecting external measuring equipment (9) for
measuring the speed of a vehicle, wherein the switching
device (2) is furthermore so arranged that the signal
10 will only be transmitted upon detection of said external
measuring equipment (9).
8. A method for preventing a vehicle (1) from speeding,
wherein a switching device is connected to a speedometer
15 (4; 7) present in the vehicle, which measures the speed
of the vehicle (1), wherein the switching device only
allows a transmitter (5; 8) connected thereto to
transmit a signal mainly if and as long as the speed
measured by the speedometer (4; 7) exceeds a
20 predetermined limiting value.

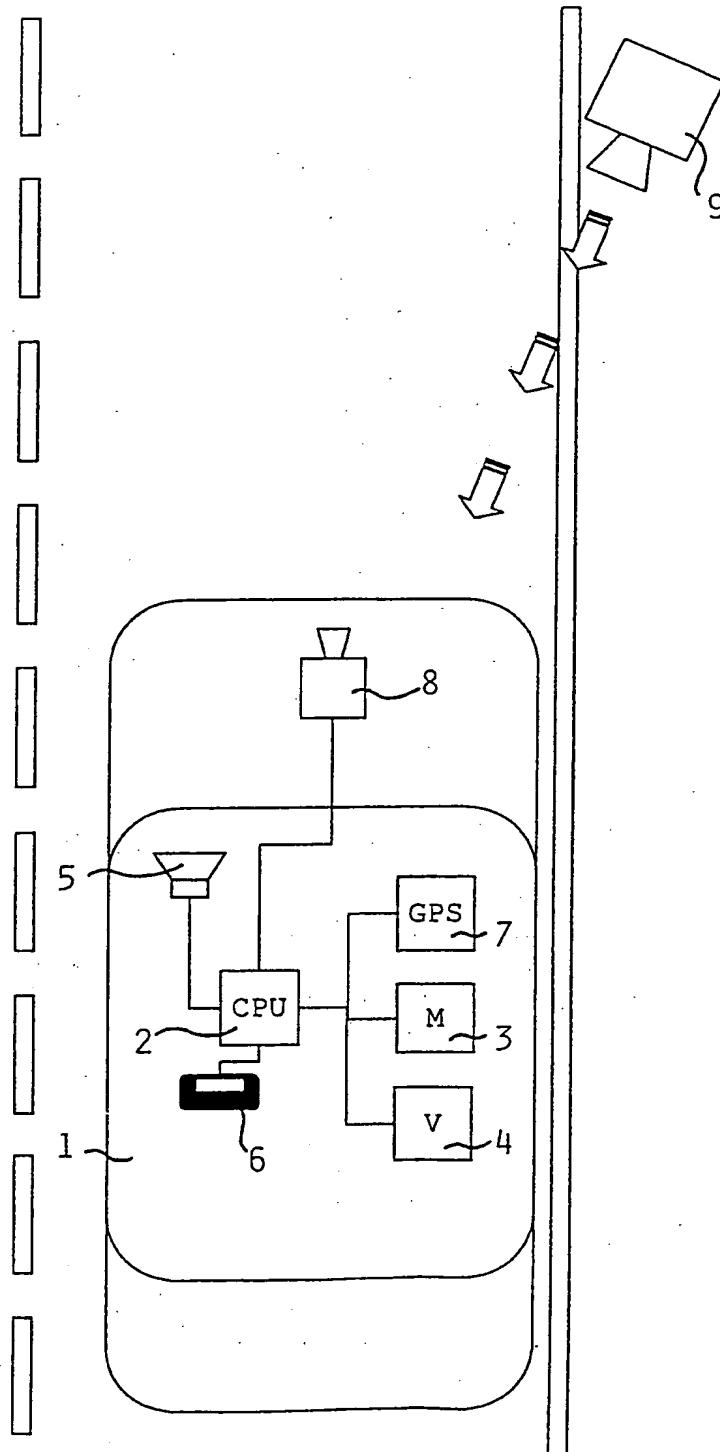


FIG. 1

INTERNATIONAL SEARCH REPORT

PCT/NL 03/00225

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G01S7/02 G08G1/0967

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01S G08G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 485 161 A (VAUGHN DAVID) 16 January 1996 (1996-01-16)	1-6,8
Y	the whole document	7
Y	US 6 201 493 B1 (SILVERMAN DAVID PHILLIP) 13 March 2001 (2001-03-13) column 2, line 54 -column 3, line 10	7
Y	US 5 977 884 A (ROSS MONTE) 2 November 1999 (1999-11-02) column 2, line 58 -column 4, line 36	7

☐ Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents:

*A' document defining the general state of the art which is not considered to be of particular relevance

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*L' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

*O' document referring to an oral disclosure, use, exhibition or other means

*P' document published prior to the international filing date but later than the priority date claimed

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*X' document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

*Y' document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

*& document member of the same patent family

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5485161	A	16-01-1996	NONE
US 6201493	B1	13-03-2001	NONE
US 5977884	A	02-11-1999	NONE